Zeeman Effect of an Induced Absorption Line in Highly Excited CuCl(Physics)

increased the stacking sequence changes from $(3\underline{1})_3$ to $(1\underline{1})$, passing through $(3\underline{1}1\underline{1})_3$, with increasing amount of stacking disorder, while the atomic arrangement in the close-packed plane remains unchanged irrespective of the composition. Structural changes observed in the present investigation have been found similar to the pressure effects in Mg_3In previously reported. The stability of the long-period layer stacking structure is briefly discussed by application of the pseudo-potential theory.

Zeeman Effect of an Induced Absorption Line in Highly Excited CuCl

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Zeeman effect is studied for a narrow absorption line at 390.89 nm in CuCl crystal induced by a nitrogen laser excitation, the appearance of which was reported previously as a possible evidence for the Bose condensation of excitons. From the Zeeman splitting, it is concluded that this absorption corresponds to the formation of an exciton bound to a transiently generated neutral donor.

Near-Edge Spontaneous Photoluminescence in $GaSe_{1-x}S_x$

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Phys. Status Solidi b, **72** (1975), 81.

Photoluminescence spectra of $GaSe_{1-x}S_x$ ($0 \leqq x \leqq 0.2$) are investigated at 4.2 K by the time resolving method. The shift in the photon energies of the luminescence lines with respect to the chemical composition x may be understood without any quantitative contradiction if one employs the empirical model that the direct conduction band edge lies 5 meV below the indirect one, whereas the ground state of the direct exciton lies 13 meV above that of the indirect one in ε, γ-GaSe at 4.2 K. The direct-indirect gap reversal occurs near $x=1\times10^{-2}$.

Matsushita Carbon Resistors as Thermometers for Use at Low Temperatures and in High Fields

Sinhachiro SAITO and Takashi SATO

Rev. Sci. Instrum., **46** (1975), 1226.

A survey has been made of the properties of 1/8W composite resistors made by the Matsushita Electric Ind. Co. Ltd. to determine whether they might be suitable as secondary thermometers in the low-temperature region. From the measurements of resistance vs temperature, between 105°C and 40 mK, it is confirmed that the grade ERC-18SGJ resistors in various nominal room-temperature resistance values from 20 to 510 Ω are suitable in very low-temperature work, and that resistors in the nominal resistance range 20–100 Ω are the most suitable for work down to sevral